

REMARKS

Claims 1 and 3-21 have been examined. With this amendment, Applicant cancels claim 15 and adds claims 22-27. Claims 1, 3-14 and 16-27 are all the claims pending in the Application.

1. Formalities

Applicant thanks the Examiner for initialing the reference listed on form PTO-1449 submitted with the Information Disclosure Statement filed on October 31, 2003.

2. Claims Rejections Under 35 U.S.C. § 112

The Examiner has rejected claims 1 and 3-21 under 35 U.S.C. § 112, second paragraph as being indefinite because independent claims 1 and 12 use the abbreviation TE in the claim language and claims 3-6, 16 and 17 depend on canceled claim 2.

Applicant has amended independent claims 1 and 12 to recite "transverse electrical (TE)" instead of "TE." Applicant has also corrected the dependencies of claims 3-6, 16 and 17. Applicant respectfully requests that the rejections be withdrawn.

3. Claims Rejections Under 35 U.S.C. § 103

The Examiner has rejected claims 1 and 3-21 under 35 U.S.C. § 103(a) as being unpatentable over Kitaoka et al. (US 6,327,289) ["Kitaoka"] in view of Sonoda et al. (US 5,838,486) ["Sonoda"]. For at least the following reasons, Applicant respectfully traverses.

Claim 1 recites a semiconductor laser module "wherein the light exit portion of said semiconductor laser and the light entrance portion of said optical wavelength conversion element are bonded together with a thin film insulator interposed therebetween."

In the rejection of claim 9, the Examiner asserts that the SiO₂ thin film 16 disclosed in Fig. 4B of Kitaoka corresponds to the claimed thin film. However, Kitaoka discloses that the SiO₂ thin film 16 is a protection film used for adjustment in the thickness direction (col. 10, lines 8-11) and disposed between an optical wavelength conversion element 11 and submount 6 with layer 7 (Fig. 4B), which do not correspond to the light entrance and exit portions as set forth in claim 1. Therefore, Applicant submits that Kitaoka and Sonoda (alone or in combination) do not disclose or suggest that a thin film insulator be interposed between a semiconductor laser and an optical wavelength conversion unit as set forth in claim 1.

Because claims 3-11 and 16-20 depend on base claim 1, Applicant submits that these claims are patentable at least by virtue of their dependency.

With respect to claim 12, Applicant submits that Kitaoka does not disclose that "the reference surface for light entry of said optical wavelength conversion element holder and the reference surface for light exiting of said semiconductor laser holder are joined" as set forth in claim 12. In the rejection of claim 15, the Examiner contends that Fig. 22 discloses this feature.

However, Kitaoka discloses a gap between the laser chip 502 and wavelength converting device 504 by forming a Ta film thickness of about 1 μ m at one end of the wavelength converting device 504 (col. 29, lines 11-17). For other embodiments, Kitaoka discloses that the interval between the light emitting region and the optical waveguide element is about 3 μ m (col. 10, lines 23 -26). Further, Sonoda does not cure the deficient teachings of Kitaoka.

In addition, Kitaoka and Sonoda (alone or in combination) do not disclose “optical wavelength conversion holder” which is “able to fix [the] optical wavelength conversion element” as set forth in claim 12. Therefore, Applicant submits that claim 12 is patentable for at least the above reasons.

Because claims 13, 14 and 21 depend on base claim 12, Applicant submits that these claims are patentable at least by virtue of their dependency.

4. New Claims

With this Amendment, Applicant adds claims 22-27. Applicant submits that these claims are patentable by virtue of the features recited therein.

5. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

AMENDMENT UNDER 37 C.F.R. § 1.114(c)
Application No.: 09/533,678

Attorney Docket No.: Q56799

Pursuant to 37 C.F.R. § 1.136, Applicant is filing a petition (with fee) for one month of extension time herewith, making this response due on or before May 28, 2004. The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,


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